



Patent
Attorney's Docket No. 032505-1010

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Graeme Cox, et al.

Application No.: 09/807,277

Filed: April 11, 2001

For: A Method of Modulating Ion Channel Functional Activity

Group Art Unit: 1614

Examiner: Unassigned

INFORMATION DISCLOSURE STATEMENT TRANSMITTAL LETTER

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Enclosed is an Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of \$180.00 (126) as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A certification under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A certification under 37 C.F.R. § 1.97(e), and the fee of \$180.00 (126) as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge \$_____ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of \$_____ is enclosed for the fee due.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

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Date: April 2, 2002



Attorney's Docket No. 032865-010

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INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, Applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98. Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.

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3. Benos, et al., "Envelope glycoprotein gp 120 of human immunodeficiency virus type 1 alters ion transport in astrocytes: Implications for AIDS dementia complex" *Proc. Natl. Acad. Sci. USA*, 91:494-498 (1994);
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5. Bubien, "HIV - gp120 activates large - conductance apamin sensitive potassium channels in rat astrocytes" *Am. J. Physiol.*, 286(6, part 1): C1440-C1449 (1995);
6. Cragoe, E.J., et al., "Pyrazine Diuretics. N-Amidino-3-amino-5-substituted 6-Halopyrazinecarbozamides", *J. Med. Chem.*, 10:66-75(1967)
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14. Jabbar, M.A., "The Human Immunodeficiency Virus Type 1 Vpu Protein: Roles in Virus Release and CD4 Downregulation, Cleveland Clinic Foundation, Dept. of Molecular Biology, pp: 107-118.
15. Kelly, et al., "Cutting Edge: Dichotomous Effects of B-Chemokines on HIV Replication in Monocytes and Monocyte-Derived Macrophages", *J. Immunol.*, 160:3091-3095 (1998);
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18. Love, et al., "Stable high-copy-number bacteriophage λ promoter vectors for overproduction of proteins in *Escherichia coli*", *Escherichia coli. Gene*, in press (1996);
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25. Mitsuya, "Development of Inhibitors of Reverse Transcriptase and Protease as Therapeutics Against HIV Infection", *Enzyme Inhibition*, 6:1-8 (1992);
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27. Moore, "Coreceptors: Implications for HIV Pathogenesis and Therapy", *Science*, 276:51-52 (1997);
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53. Wray, et al., "Solution Structure and Orientation of the Transmembrane Anchor Domain of the HIV-1-Encoded Virus Protein U by High-Resolution and Solid-State NMR Spectroscopy", *Biochemistry*, 38(16):57272-5782 (1999); and
54. Yamato, et al., "Site-specific alteration of Arginine 376, the Unique Positively Charged Amino Acid Residue in the Mid-membrane-spanning Regions of the

Proline Carrier of *Escherichia coli.* ", *Escherichia coli. J. of Biol. Chem.*,
269:5729-5724 (1994).

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

While this Information Disclosure Statement may contain "material" information pursuant to 37 C.F.R. § 1.56, it is not intended to constitute an admission that any patent, publication or other information referred to herein is "prior art" to the invention disclosed and claimed in the above-referenced application unless specifically designated as such.

Applicants specifically reserve the right, where appropriate, to antedate the reference by the appropriate showing under 37 C.F.R. § 1.131 and § 1.608, or any other appropriate means.

This Information Disclosure Statement is not a representation that a search has been made or that no other information material to the patentability of this invention exists.

The document is being submitted before the first Office Action on the merits, therefore no fee or certification is required under 37 C.F.R. § 1.97(b).

In the event that an Office Action on the merits has been mailed before the filing of this Information Disclosure Statement, the Commissioner is hereby authorized to charge required fees to our Deposit Account No. 02-4800.

Respectfully submitted,

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Date: April 2, 2002

Substitute for form 1449A/PTO

ATTORNEY'S DKT NO.
032505-010APPLICATION NO.
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STATEMENT BY APPLICANTAPPLICANT
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U.S. PATENT DOCUMENTS

Examiner Initials	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication (MM-DD-YYYY)
	Number	Kind Code (if known)		

FOREIGN PATENT DOCUMENTS

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	Number	Kind Code (if known)			Yes	no

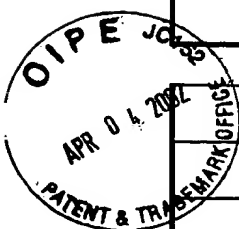
NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	Balliet, J.W., et al., "Distinct Effects in Primary Macrophages and Lymphocytes of the Human Immunodeficiency virus Type 1 Accessory Gense <i>vpr</i> , <i>vpu</i> , and <i>nef</i> : Mutational analysis of a Primary HIV-1 Isolate", <i>Virology</i> , 200:623-631 (1994)
	Barry, M., et al., "Antiretroviral therapy for patients with HIV Disease", <i>Br J. Clin. Pharmacol.</i> , 45:221-228 (1998)
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	Grice, et al., "Ion channels formed by HIV-1 Vpu: a modelling and simulation study", <i>FEBS Lett</i> , 405(3):299-304 (1997)
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Yamato, I., et al., "Site-specific alteration of Arginine 376, the Unique Positively Charged Amino Acid Residue in the Mid-membrane-spanning Regions of the Proline Carrier of *Escherichia coli*.", *J. of Biol. Chem.*, 269(8):5729-5724 (1994)

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